

C. Rolphii, collected by him at Charlton near Woolwich, it presents the following differences.

In *C. Rolphii* the shell is more elongate and the spire more gradually decreasing in breadth towards the apex, not ventricose, and suddenly narrowing to the attenuated upper portion of the spire, as in *C. Mortilleti*. It is lighter in colour, with a fulvous tint, rather than the purplish hue which pervades the specimens of the latter; the basal crest is not prominent or sharply defined, and the rima is narrow, and elongated nearly to the base; whereas in *C. Mortilleti* the crest forms a strong funiculate keel, and the periomphalus is open and semicircular. In *C. Rolphii* the lower lamella is cruciate; both species are deficient in the palatal callus so conspicuous in the true *C. plicatula*, Dr.

Length of *C. Rolphii*, 14 mill.

— of *C. Mortilleti* from Charlton-Kings near Cheltenham, 14 mill.

— of ditto from Charing, 11 mill.

C. Rolphii has $10\frac{1}{2}$ whorls; *C. Mortilleti* only $9\frac{1}{2}$ in English examples, but a specimen of a more slender variety, which I got at Chaud-fontaine in Belgium, exhibits the same number as *C. Rolphii*.

Thus the two distant counties of Kent and Gloucestershire produce a shell which has so long been unaccountably overlooked on the continent, as well as in England. There are some who still persist in confounding *C. Rolphii* with *plicatula* of Draparnaud, notwithstanding the differences observable, and the assurance of De Férussac, as reported by Gray. Independently of other characters the more remote costation of *plicatula*, its palatal callus, and different mode of rimation sufficiently distinguish it. In colour its ranges with *C. Mortilleti*, the differences of which were pointed out by Adolf Schmidt in the 'Annals' for January last.

C. plicatula, omitted in Mr. Jeffreys's notes on the Swiss Mollusca (Annals for January 1855), but noticed in his collection catalogue, occurs at Monthey and St. Maurice in the Valais, as well as at Glarus. In both catalogues he has omitted *C. pumila*, Ziegler, var. β , Pfr., and *C. lineolata*, Held. The latter shell I got in the tract explored by him, between Chillon and Villeneuve, as well as in the north of Switzerland.

W. H. BENSON.

12th June 1856.

On the Siliceous Sporangial Sheath of the Diatomaceæ.

In the 16th volume (1855, p. 92) of the 'Annals of Natural History,' I pointed out the occurrence of a siliceous sheath enveloping the sporangial frustule of a *Navicula* (*Amphirhynchus*?), and stated that "it was composed of silex, *i. e.* was indestructible by heat and nitric acid;" also, that it was "colourless, elongate, rounded at the ends, and furnished with coarse transverse striæ, or depressions, through which the line of fracture runs when the object is crushed."

In the 2nd volume of the 'Synopsis of the British Diatomaceæ,' the Rev. W. Smith states, that he has never observed this siliceous sheath, and that "probably it may have been an *appearance* resulting from the condensation and corrugation of the mucus developed around the reproductive body."

I need scarcely say that Mr. Smith's conclusion is untenable, for no kind of mucus will resist the action of a red heat and nitric acid. Moreover, the specimen was not an isolated one, but hundreds of them were present. It is, however, perhaps excusable that Mr. Smith should consider me as having been misled by an appearance, having himself mistaken the cellular appearance upon the valves of the Diatomaceæ for the expression of a cellular structure.

In regard to the "blunder" committed by Dr. Hassall in the formation of the name *Gyrosigma* (which is not alliterative however), I may remark, that this name was retained in the 'Micrographic Dictionary' and elsewhere, because it had claims from priority, and from its adoption by Kützing and Rabenhorst; also because, although objectionable in structure, it was less so than the name *Pleurosigma*; considering that no two authors agree as to which is the side of a Diatomacean frustule.

Again, the objection to the name *Gyrosigma* applies also to some other established generic names, as *Spirogyra*, &c., the alteration of which would cause great and unnecessary confusion.

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Travels in Central America. By MM. SCHERZER and WAGNER.
(Communicated by Count MARSCHALL.)

Dr. Scherzer lately communicated to the Imperial Academy of Sciences at Vienna (March 6, 1856) a report of his travels through the northern portion of Central America, undertaken, in company with Dr. M. Wagner, in 1852-55. A meteorological journal was carefully kept during the whole journey; and the altitudes of mountains, plateaux, and volcanic peaks, together with the limits of the diffusion of the most important among the animals and the cultivable vegetables, were approximately determined by the aneroid barometer. Intercourse with the savage Indian tribes, and residence at villages of the settled and agricultural aborigines of Honduras, San Salvador, and Guatemala, provided the travellers with valuable materials for their ethnographical studies. The governments through whose territories MM. Scherzer and Wagner passed most readily communicated a large amount of statistical and administrative information.

An extensive entomological collection was made in Costa Rica and Guatemala; and MM. Scherzer and Wagner brought home about 40,000 specimens of Invertebrata; among which are nearly 300 undescribed species (according to MM. Klug and Hopffer, of Berlin) of Coleoptera, Lepidoptera, and Hymenoptera. There are also many new and interesting forms among the land and freshwater Mollusca.